

ENGINEERING TARGET:
TOMORROW

EOH

MARCH 8th - 9th 1977

DEPARTMENT OF MECHANICAL
AND
INDUSTRIAL ENGINEERING
UNIVERSITY OF ILLINOIS

Mechanical and Industrial Engineering

The Department of Mechanical and Industrial Engineering provides a theoretical background for a career which employs knowledge of computer-controlled systems, metal and material characteristics, systems planning and optimization, machine design methods, heat transfer and thermodynamics, and basic economics.

Mechanical engineers are concerned with the use and economical conversion of energy to provide power, light, heat, cooling, and transportation. They design and produce machines to lighten the burden of human work, and they engage in the creative planning, development, and operation of systems for using energy, machines, and resources.

"Industrial Engineering is concerned with the design, improvement, and installation of integrated systems of men, materials and equipment. It draws upon specialized knowledge and skill in the mathematical, physical and social sciences together with the principles and methods of engineering analysis and design to specify, predict and evaluate the results to be obtained from such systems.

-American Institute of Industrial,
Engineers, Inc.

DEPARTMENT HEAD - - - - - Prof. Bei T. Chao
ASSOCIATE DEPT. HEAD - - - - - Prof. James W. Bayne
M. E. FACULTY ADVISOR - - - - - Prof. David H. Offner
I. E. FACULTY ADVISOR - - - - - Prof. Leo C. Pigage

INDUSTRIAL ENGINEERING EXHIBITS

ROOM 249

- ① Truck Terminal Analysis
- ② Control Compatibility
- ③ Knapsack Survival

ROOM 243

- ④ Industrial Exhibit Cummins Engine
- ⑤ Computer Disco
- ⑦ Plant Layout

ROOM 235

- ⑥ Quality Control
- ⑦ Safety of Common Tools
- ⑧ Dust Explosion and Safety
- ⑨ Finger Manipulation

ROOM 221 (Rear)

- ⑩ End Milling
- ⑪ EDM

ROOM 221

- ⑫ Ash Tray Stamping
- ⑬ Polymers

ROOM 218

- ⑭ High Frontier Society

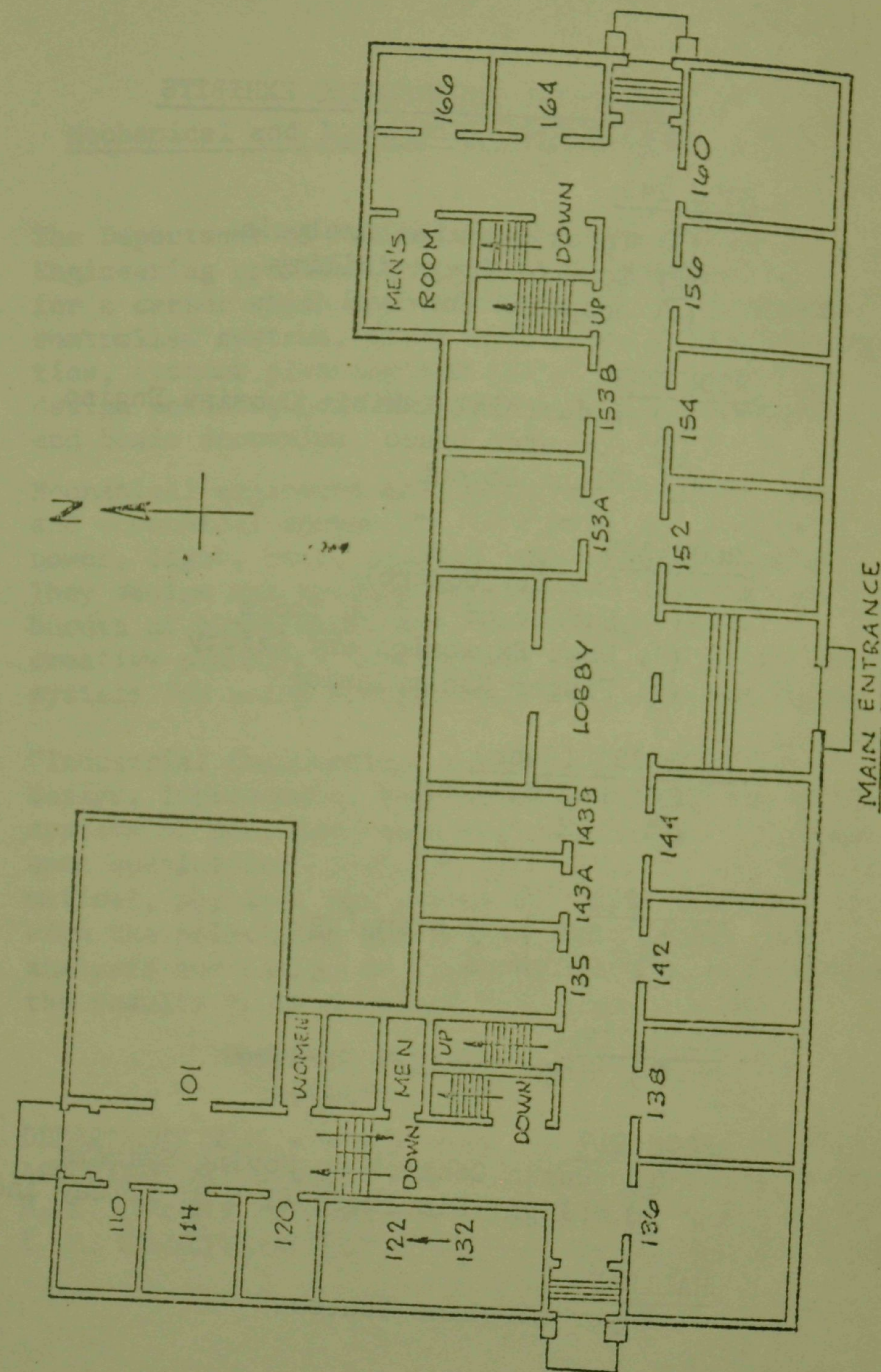
ROOM 217

- ⑮ Human Control on Moving Systems
- ⑯ Flight Simulator (1 & 3: Friday and Saturday)

HALLWAY

Paper Airplane Contest

MECHANICAL ENGINEERING BUILDING 1st floor exhibits



MECHANICAL ENGINEERING EXHIBITS

ROOM 101 - INTERNAL COMBUSTION ENGINES LABORATORY

- ① Gasohol Exhibit
Gas Mileage Test-Dynamometer Simulation
Society of Automotive Engineers
- ② Bajo Project
- ③ Mario Andretti's Race Car
- ④ Mini Indy Car

Visible Rotary Engine and Cut-away Turbine
Combustion Movie

ROOM 114 & 120 - HEAT TREATMENT LABORATORY

(Lab Hours: Friday 11-5; Saturday 10-3)

Microscopic Observation of Microstructures
Cooling Curve Determination
Impact Testing

- ⑤ Tensile Testing (on the hour)
- ⑥ Hardenability Testing-Jominy (on the half hour)

ROOM 135 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS

- ⑦ "Race to Tomorrow" --Design Contest
- ⑧ Solar Energy for Home Use

ROOM 143-MACHINE DESIGN, THERMAL SCIENCE AND SYSTEMS

- ⑨ An Integrated System of Ingenious Mechanisms
- ⑩ Heat Pump
- ⑪ Vortex Tube Heating and Cooling
- ⑫ Flowability of Powder Metal
- ⑬ Vibration Investigation and Elimination
- ⑭ Rubber Band Heat Engine

ROOM 149 - LOUNGE

- ⑮ NASA Space Shuttle

ROOM 153 A&B PI TAU SIGMA HONOR SOCIETY-MECHANICAL

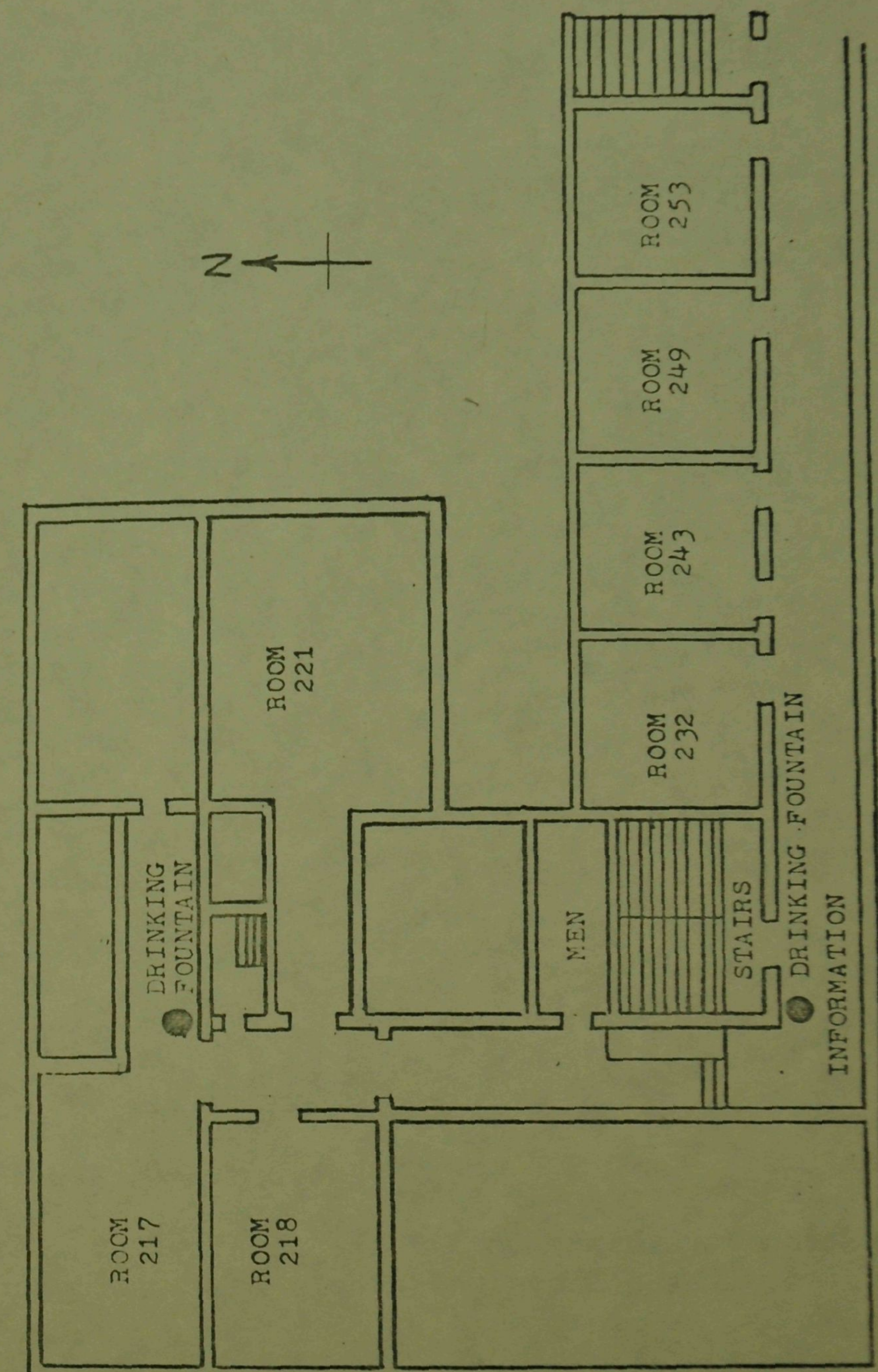
Engineering-Industry, Research and Education for Tomorrow

- ⑯ Industrial Sewing Equipment Demonstration
⑰ Internal Engine/Stirling Engine Exhibit
Pinto 2300 c.c.
Buick V-6 Turbo
Oldsmobile Diesel
Ford 351C10 V-8
Stirling Demonstration

- ⑱ Alternate Fuels for Tomorrow
⑲ Wing Mechanism of a Household Fly
⑳ Waste Heat Disposal of Generating Plants
Slide/Tape Presentation; "Path of Success"
(shown on the hour)
Film Presentation; "Action in Motion"
(shown on the half hour)

- ㉑ FOUNDRY BUILDING
Die Casting Machinery
Green Sand Molds
Molding Demonstrations
Evaporation Casting
Aluminum Pouring (on the hour)
Cast Iron Poured from the Cupola
(Friday 3:00 p.m.)

- ㉒ MECHANICAL ENGINEERING POWER LAB (ADMITTANCE
by TOUR ONLY. Tours depart from Rm. 110; on
Friday at 12, 1&2; Saturday at 10, 11, & 12)
Coal Gasification
Underground Cable Cooling
Fluidized Bed Combustion
Cryogenic Wind Tunnel



2nd FLOOR

MAR 9 - 1979

ENGINEERING OPEN HOUSE COMMITTEE

M.E. CHAIRPERSON

Marlene Schaefer

ROO

THERMAL SCIENCE & SYSTEMS

Engine

Chris Obos

MACHINE DESIGN

Eric Smith

I.C.E. LAB.

Wayne Jouse

HEAT TREATMENT

Dave Domash

FOUNDRY

Jack Portwood

John Thilking

A.S.M.E.

Craig Espevik

Paul Poorman

PI TAU SIGMA

Russ Skocypec

S.A.E.

Dennis Tragarz

EQUIPMENT

Ray Skarda

TOURS

Tim Longuist

I.E. CHAIRPERSON

Pat Brady

EQUIPMENT

*John Sutherland

Jim Faunders

Doug Wilhelmi

Sherry Wolfe

EXHIBITS

*Ron Giancola

Terry Durbin

Eric Peterson

Lynn Kohan

Bruce Dow

Pam Douglas

Dave Baird

EXTERNAL PUBLICITY

*Bruce Tompkins

Dave Musial (map)

INTERNAL PUBLICITY

*Nancy Schumacher

Bill Cummins

A.I.I.E. and S.A.E.

Dave Dlesk

Bill Bloom

We extend our thanks to all the faculty, students, and staff not listed above whose help made this year's Engineering Open House possible.